REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 16-34 are pending in the present application. Claims 1-15 have been cancelled without prejudice and Claims 16-34 have been added by the present amendment.

In the outstanding Office Action, Claim 15 was rejected under 35 U.S.C. § 112, second paragraph; Claims 1-10 and 12-15 were rejected under 35 U.S.C. § 102(e) as anticipated by Rosenberg et al. (U.S. Patent No. 6,750,877 B2, herein "Rosenberg"); and Claim 11 was rejected under 35 U.S.C. § 103(a) as unpatentable over Rosenberg.

The rejection of Claim 15 under 35 U.S.C. § 112, second paragraph is moot because Claim 15 has been cancelled.

The outstanding rejections on the merits of Claims 1-15 are moot because these claims have been cancelled. However, the applied art is discussed in regard to newly added Claims 16-34. New independent Claim 16 includes the subject matter of now cancelled Claims 1 and 12 and new independent Claim 18 includes the subject matter of now cancelled Claims 1 and 11. New dependent Claims 17 and 19-34 are similar to now cancelled Claims 2 and 4-15, except that new dependent Claims 17 and 19-34 have been modified to better comply with U.S. patent practice. No new matter has been added.

Briefly recapitulating, new independent Claim 16 is directed to a method for operating a haptic interface unit. The method includes, *inter alia*, providing an inverted damping operation mode in which at least partially generating an interaction feedback force data to be representative for an interaction feedback force which increases with a decreasing velocity, and the interaction feedback force data are at least partly generated to be representative for an interaction feedback force which decreases with an increasing velocity. An absolute force value of the interaction feedback force or a vectorial component thereof is

decreased to zero if the respective velocity or a vectorial component thereof increases above a given threshold maximum velocity value.

In a non-limiting example, Figures 1A-C show the interaction feedback force having a variable value within the inverted damping operation mode (between vmin and vmax) and a zero value for velocities larger than vmax.

Turning to the applied art, Rosenberg discloses an interface device that allows a user to interface with a computer, and more particularly, a haptic feedback interface device allowing a user to interface with a graphical environment displayed by a computer.

The interface device includes an object that can be manipulated by the user and the object is capable of controlling the motion of a cursor displayed in the graphical environment and an actuator for outputting a haptic effect to the user of the interface device, as disclosed by Rosenberg.

Rosenberg shows in Figure 5a a force gain between 0 and 1 for a range of velocities corresponding to minimum and maximum velocities. However, as discloses by Rosenberg at column 17, lines 55-65, there is no force or force gain applied beyond a maximum velocity. In fact, there is no velocity larger than the maximum velocity shown in Figure 5a. In another embodiment, Rosenberg shows in Figure 5c that a force gain for a velocity larger than a maximum velocity V2 is K2, i.e., the applied force has a value K2 times the conventional force and K2 is smaller than 1.

To the contrary, the method of Claim 16 recites that the interaction feedback force is zero for velocities larger than the maximum velocity attained within the inverted damping operation mode, which is different from Figures 5a and 5c of Rosenberg.

In other words, Claim 16 distinguishes over Figure 5a of Rosenberg because the device of Rosenberg cannot have a velocity higher than the maximum velocity of the inverted

damping operation mode. In addition, Claim 16 distinguishes over Figure 5c of <u>Rosenberg</u>

because the force of <u>Rosenberg</u> cannot be zero when the velocity is larger than V2.

Thus, it is believed that independent Claim 16 and each of the claims depending

therefrom patentably distinguish over <u>Rosenberg</u>.

New independent Claim 18 is directed to a method for operating a haptic interface

unit. The method includes, *inter alia*, providing an inverted damping operation mode in

which an interaction feedback force data are at least partly generated to be representative for

an interaction feedback force which increases with a decreasing velocity and the interaction

feedback force data are at least partly generated to be representative for an interaction

feedback force which decreases with an increasing velocity. The method also provides a

holding force mode in which an absolute force value of the interaction feedback force or a

vectorial component thereof is increased in a position dependent form to a predetermined

hold force value or above, if the respective velocity or a vectorial component thereof

decreases below a given threshold minimum velocity value. The predetermined hold force

value is larger than the interaction feedback force within the inverted damping operation

mode.

In a non-limiting example, Figure 1A shows the inverted damping operation mode

corresponding to a variable force between a minimum velocity and a maximum velocity, and

a holding force mode corresponding to a force between a zero velocity and the minimum

velocity. The force of the holding force mode is larger than the force of the inverted damping

operation mode.

The outstanding Office Action asserts that <u>Rosenberg</u> shows in Figure 5c the inverted

damping operation mode between velocities V1 and V2 and the holding force mode between

velocities 0 and V1. However, <u>Rosenberg</u> does not teach or suggest that the force

corresponding to velocities zero to V1 is higher than the force corresponding to velocities V1

and V2. It is noted that Figure 5c of <u>Rosenberg</u> shows that the force for velocities smaller

than V1 is equal to a force corresponding to the V1-V2 range.

Thus, it is believed that independent Claim 18 and each of the claims depending

therefrom patentably distinguish over <u>Rosenberg</u>.

Consequently, in light of the above discussion and in view of the present amendment,

this application is believed to be in condition for allowance and an early and favorable action

to that effect is respectfully requested.

Respectfully submitted,

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